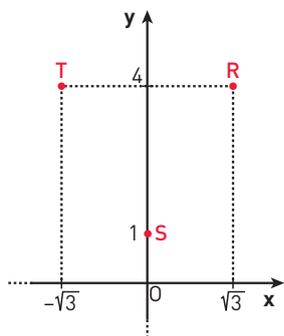


YOU & MATHS **An equilateral triangle** Given the points $R(\sqrt{3}, 4)$, $S(0, 1)$, and $T(-\sqrt{3}, 4)$ on the plane, verify that they are the vertices of an equilateral triangle.

Let us draw the points on the plane.



The lengths of the sides are:

$$\overline{TR} = 2\sqrt{3};$$

$$\overline{RS} = \sqrt{\sqrt{3}^2 + (4-1)^2} = \sqrt{3+9} = 2\sqrt{3};$$

$$\overline{TS} = \sqrt{\sqrt{3}^2 + (4-1)^2} = \sqrt{3+9} = 2\sqrt{3}.$$

Since all the sides have equal length, the triangle is equilateral.